



These items are in bins for students to use to build with.

- pine cones
- corks
- playdough
- toy train and car track
- chalk
- nuts and bolts
- aluminum foil
- small wooden pieces (different sizes)
- string, yarn, fabric pieces
- cotton balls
- popsicle sticks
- rubber bands
- different size cardboard boxes
- miscellaneous scrap materials

Engineering Notebook

By: _____



My Cardboard Arcade Design Challenge

Name _____

Caine's Arcade

After viewing the video caine's arcade

(<https://www.youtube.com/watch?v=falFNkdq96U>) complete the see, think, wonder graphic organizer.

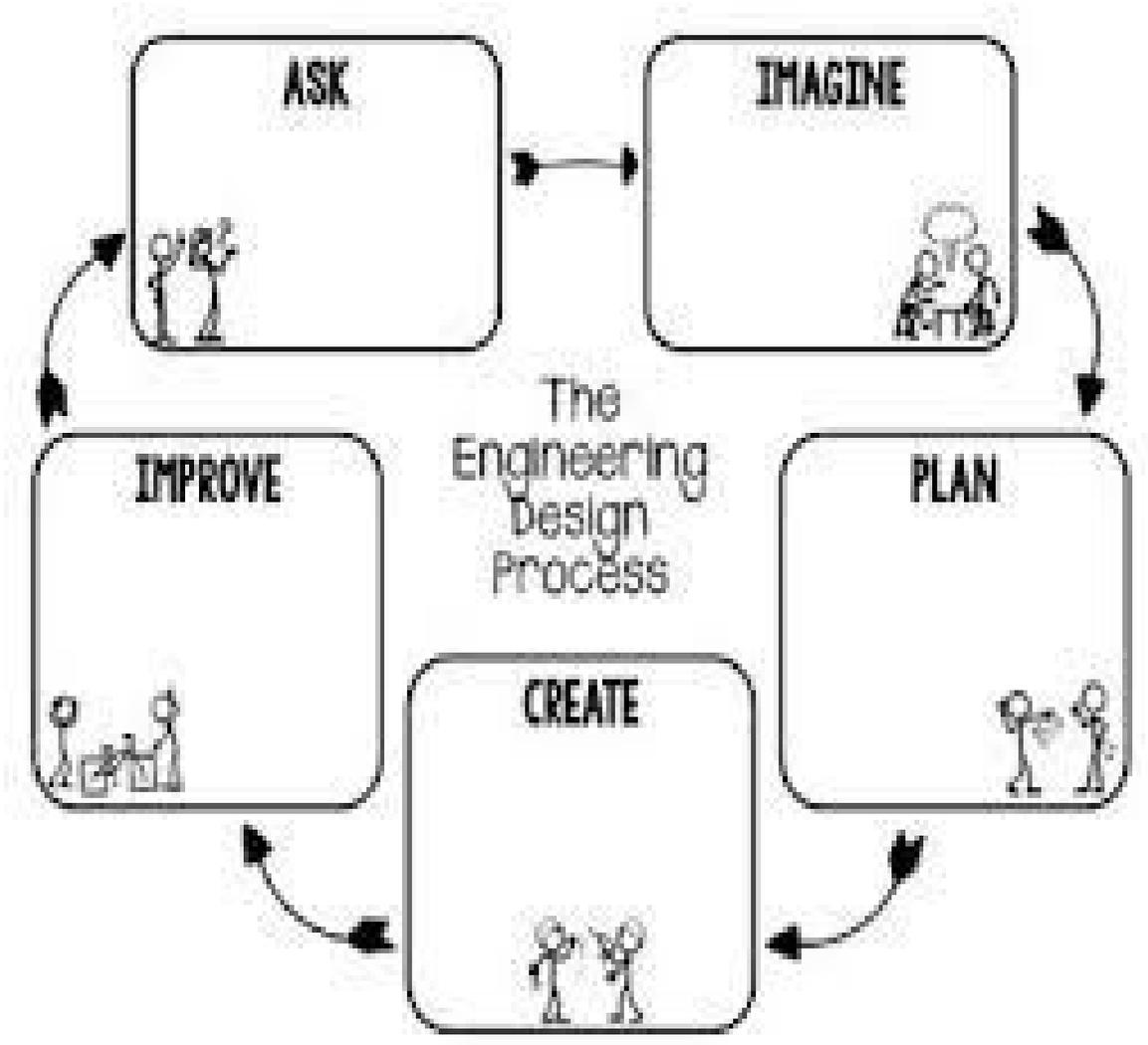
<u>See</u> What did you see?	<u>Think</u> What do you think it means?	<u>Wonder</u> What do you wonder?

What do you imagine when thinking of building an arcade?

Name _____

Begin to think and plan your arcade.

Engineer Design Process



Name: _____

STEM Challenge Plan Page

ASK? What is the CHALLENGE

How can I use recycled materials to build an arcade game?

How can I use mathematical concepts of area and dimensions while planning my arcade game?

Materials Needed

Requirements

- Must be able to be played by others.
- Must be able to explain the area and dimensions of the game.
- Must have a way to keep score.
- Must have a prize or ticket/price to play.

Questions

What questions do you still have for this challenge?



Explore Your Ideas

List games you enjoy playing and why? How can these games give you ideas for planning your own arcade game.

Games you enjoy	Why do you like them?	How could you include this in your own arcade plan?



PLAN YOUR DESIGN

Create a diagram (picture with labels) of your solution to the challenge. Remember to label your materials and how each part will be used.

My Game Directions

Name of your game _____

Materials Needed to play the game

Step by Step directions to play the game

First

Next

Then

Finally

Scoring Guide

